

# California Agricultural Resource Directory 2006

California Department  
of Food and Agriculture

THE  
**Good**  
THE  
**Bad**  
AND THE  
**Bird Flu**  
*Prevent, Detect  
and Respond*

**Guardians of the New West**  
*Where the Old West Meets High Tech*

**"Trust** BUT  
**Verify"**  
*Keeping Our Milk  
Safe and Nutritious*

**Cowboys**  
OF THE  
**West**  
*Protectors of  
Animal Agriculture*





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*Protectors of Animal Agriculture*



**The Good, the Bad,  
and the Bird Flu:**  
*Prevent, Detect and Respond*



**"Trust, but Verify."**  
*Keeping Our Milk Safe  
and Nutritious*



**Guardians  
of the New West**  
*Where the Old West  
Meets High Tech*

**Letter by**  
Governor Arnold Schwarzenegger

**Foreword by**  
A.G. Kawamura, Secretary

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of Food and Agriculture

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## A LETTER FROM GOVERNOR ARNOLD SCHWARZENEGGER

Dear Friends,

California's agricultural history is a story of our residents' characteristic hard work and optimism. In 1773, there were only 204 head of cattle in the state, most of them on mission land. Determined efforts in those early years produced growth and success, and by 1800, the cattle count rose to 187,000. This great increase was not an anomaly; it foreshadowed our state's tremendous agricultural future. Today, California's modern cattle farms and ranches are teeming with up to 6 million head.

In all, California agriculture produces 400 crops and \$32 billion in direct farm sales, which constitutes a significant part of our state's dynamic economy. I am proud that the spirit of ingenuity that helped to shape the foundations of California agriculture continues to guide our state's farmers and ranchers today.

However, with success, come challenges. California agriculture is threatened by old foes such as severe weather and by new ones such as bovine spongiform encephalopathy, avian influenza and other diseases and pests. Through the California Department of Food and Agriculture, we are working to protect our vast plant and animal industries from these threats. Our state's army of inspectors, scientists and health and safety officials are battling everything from criminals to microbes to ensure the safety of our food supply. This year's *California Agricultural Resource Directory* describes our protection and safety efforts in many areas — from using DNA technology to stop cattle rustlers to utilizing the latest advancements in dairy inspection and virus tracking.

My administration is committed to building on the successful legacy of California's agricultural pioneers by improving the safety of our farm



and ranch products, expanding our markets and encouraging balanced environmental stewardship. With your help, we will be successful in these endeavors and lead our state's agricultural industry into a bright and prosperous future.

I encourage you to use this resource directory to learn more about our state's agricultural industries and the people and organizations that are crucial to their success.

Sincerely,

A handwritten signature of Arnold Schwarzenegger in black ink.

Arnold Schwarzenegger

## FOREWORD



SECRETARY

**A.G. Kawamura**

In this year's *California Agricultural Resource Directory*, we celebrate the spirit of the American Old West and the farming and ranching pioneers who worked this land. Today, as fourth- and fifth-generation farming families forge ahead with new concepts and innovations, they are implementing their own unique vision that will ensure a vibrant agricultural economy for our state.

California now produces more than 400 commodities — and behind every commodity is a face and a story. For instance, who can think of cattle without thinking of the fiercely independent cowboy? This caretaker of our working landscapes has embodied the entrepreneurial spirit and devotion to a kind of husbandry we rarely see anymore. The cowboy of yore was the only thing standing between his herd or flock and a host of predators, both human and animal. Over the years and down to the present day, the number of predators that endanger our state's agricultural commodities has grown to include viruses and insects, in addition to old-fashioned cattle rustlers.

Today's modern cowboys use old world experience and new world technology to get the job done. Scientists, technicians and field inspectors, many of whom are employed by the California Department of Food and Agriculture, assist them in their fight against would-be predators. To highlight the importance of animal health and food safety, we have devoted this publication to a closer look at our Animal Health and Food Safety Services Division. Established in 1899 as the Office of the State Veterinarian to protect animals from contagious and infectious diseases, the division now protects California's livestock and foods of animal origin from a wide range of threats.

This directory also contains the most recent information and data on the performance and output of agriculture in California. As the statistics and figures demonstrate, California's farmers and ranchers are real visionaries who have succeeded in developing new and better ways to produce food and fiber of the highest quality and with the greatest care for the environment.

As you use this resource directory to learn more about the impressive performance of California agriculture, I hope you'll also make time to discover more about the men and women who both provide and protect your food, fiber, fuel and shelter. These are the people of California agriculture, and we are proud that our future is in their hands.

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# A Reason<sup>A</sup> FOR Thanks

*By John Greber*

As I sit here on this cold, dark night,  
I watch the lightning strike wide and light up the sky.

I pull my hat down low and my jacket collar up,  
as I hear the boys on the crew sigh.

I grumbles to myself about the storm that's blowin' overhead,  
waiting to cover the Earth with a downpour of rain.

I shuffles to check the trap and get back to my bedroll,  
as fast as these ol' frozen feet will go without much pain.

I know tomorrow will be a long, wet ride  
as we make our circle to check and move some cattle.

I'll get some bacon and sourdough biscuits to start my  
morning for daybreak, then get right in the saddle.

But for now I peacefully lay back on my bedroll and relax,  
I hear the cattle bawl, and the coyotes call, as I stare  
up into the night.

We are blessed with horses to ride,  
and cattle to tend with pride.

So before I fall asleep I give thanks for this life,  
and remember all my cowboy friends who have passed  
over the great divide.

*Our cowboy poet, John Greber, is a third-generation cowboy who works on his family's cattle and hog ranch in Elk Grove, California. Mr. Greber is also a horseback riding instructor and horse trainer.*





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# Cowboys OF THE West

## *Protectors of Animal Agriculture*

BY JONNALEE HENDERSON

**T**o this day, the myths, legends and tall tales about the American cowboy stir the imaginations of people around the world. The cowboy, that iconic figure of the Old West, still conjures up images of brave, hardworking and fiercely independent characters on horseback, who by day herded cattle on the open range under a blistering sun and at night huddled around a warm campfire under the stars.

Originally known in California as buckaroos, cowboys of the Old West pursued a demanding, sometimes dangerous, occupation. It was a calling that required guts, stamina and a hard-won respect for livestock. Fearless wranglers, courageous cowhands and stalwart sheriffs inhabited this rugged terrain and helped protect and defend a country and a way of life against ever-present threats from man and nature.

Though these old timers have long ago “gone to pasture,” many of the same threats to livestock and livelihood that they struggled against are still present today. Disease, natural disasters, cattle rustling and economic hardships still exact a toll on animal agriculture.

On a daily basis, veterinarians with the California Department of Food and Agriculture’s Animal Health and Food Safety Services Division take up their regulatory reins to protect and defend the welfare of California’s livestock and poultry industry from all threats, foreign and domestic. As public servants, these professionals care as deeply about the values of the Old West as the cowboys who first lived by them.

These veterinarians, along with the division’s researchers, scientists and inspectors, work tirelessly to ensure the preservation and continuation of animal agriculture here in the West.

### **Call to Serve: Heroes of Today**

The Animal Health and Food Safety Services Division dates its origins back to the creation of the Office of the State Veterinarian in 1899, established to protect the health of all domestic animals of the state from contagious and infectious diseases. Today the state veterinarian oversees the division and has authority to establish quarantines, recalls or other regulations necessary to protect California’s livestock and foods of animal origin.

“Having grown up on a poultry ranch, and having been a practicing veterinarian before joining the department, I can relate to the challenges that business owners face,” said Dr. Richard Breitmeyer, California’s State Veterinarian. “I enjoy working with all segments of the livestock and poultry industries; they are progressive and want to understand the science behind the issues and what they need to do. In my experiences, the industry has always stepped up and done the right thing.”

Protecting a state as diverse and vast as California is no easy task, but the division’s leadership, partnered with industry support and the eyes and ears of private veterinarians, has led the state safely through many threats to animal and human health, including anthrax, foot-and-mouth disease, West Nile virus, tuberculosis, bovine spongiform encephalopathy and exotic Newcastle disease.



photo by Ed Williams/Sonoma Co.

They also closely monitor more than two million animals imported into California each year and encourage stewardship of agricultural lands and the environment.

“I’m proud that we consistently make decisions based on science, and we strive to maintain an understanding of the latest developments,” said Dr. Annette Whiteford, Director of the Animal Health and Food Safety Services Division. “We look at all of the livestock in the state as our herd, and we try to maximize the health of that population.”

### **A West without Borders: Today’s Challenges and Opportunities**

Globalization has changed the world dramatically since the days of the Old West. People, products and food travel the world in unprecedented numbers and at historic speeds. Traveling with them are a myriad of disease-causing microorganisms. Avian influenza is a prime example of a disease threat. The Animal Health Branch has never seen a disease spread as far and as fast.

“There are benefits to becoming part of a global world, such as increased market opportunities, but if we don’t maintain our domestic food supply we will become more dependent on other sources, like we are with our energy supply,” said Dr. Whiteford.

In addition to globalization, another challenge results from the fact that less than 2 percent of the American population live or work on farms. As California’s population becomes increasingly urbanized, communicating the threats of animal diseases becomes more of a challenge, especially since 60 percent of human diseases come from animals. Viruses that have gained recent widespread attention, such as avian influenza in poultry, have highlighted the urgent need to educate and alert the public regarding the human and environmental threats of animal disease.

### **Protecting Our Poultry Exotic Newcastle Disease**

California’s vulnerability to new diseases was highlighted in

2003 when an outbreak of exotic Newcastle disease initiated the largest multi-agency animal-health-emergency response ever undertaken in the United States. Federal and state agencies spent more than \$150 million in emergency funding to eradicate the highly contagious and deadly virus affecting poultry and other birds.

During the outbreak, California’s quarantine zone covered 46,000 square miles. The response taskforce involved 6,200 onsite employees and resulted in more than 18,000 properties quarantined. A total of three million birds were destroyed. As a result of these efforts, the disease was controlled east of the Tehachapi Mountains and away from some of the state’s top poultry producing counties.

The quick and effective control of exotic Newcastle disease would not have occurred without the cooperation of those affected: farmers, ranchers and communities. “Animal owners in California reflect the cultural diversity found throughout the state, which means that we must be able to communicate in a language and manner that is understood by each individual in order to gain their trust and cooperation,” said Dr. Whiteford. The importance of reaching each impacted owner or community member on a personal level continues to be a key part of disease control strategy.

Community support, science-based policy, industry cooperation and effective communication have allowed the Animal Health and Food Safety Services Division to quickly track and



eradicate outbreaks of salmonella, tuberculosis and a myriad of other potentially devastating diseases and viruses. This experience has also prepared the division for present and future threats, such as avian influenza.

#### Avian Influenza

By the end of 2006, a devastating strain of avian influenza, a disease of birds, had ravaged poultry production in Asia, the Middle East, parts of Europe and vast regions of Africa. To date, more than 200 million chickens and ducks have been destroyed as the disease moved into previously unexposed populations.

While the ease at which this new virus moves between animals is alarming, experience indicates that, so far, the virus does not transmit easily from poultry to humans and that human cases of infection are rare. Should avian influenza reach California poultry, then a cooperative interagency effort — with the California Department of Food and Agriculture

acting as the lead agency — will act immediately to control the disease before it spreads throughout domestic poultry.

#### Protecting Our Dairy Products

The Animal Health and Food Safety Services Division not only protects our state's livestock, but also food products made from livestock.

Inspectors in the division's Milk and Dairy Food Safety Branch, in cooperation with county-approved milk inspection services, routinely visit all 2,043 of the state's dairies to ensure that milking parlors and milk rooms are operated and maintained according to sanitation requirements. They also inspect milk tanker trucks and every milk processing plant to ensure that pasteurizers meet strict standards, machinery is being properly cleaned and sanitized, and that everything is operating in a sanitary manner.

The branch also responds to consumer complaints and works with the California Department of Health Services to investigate any

food-borne outbreak that might be connected to a dairy product. These rigorous dairy sanitation and food safety standards help to give California's consumers full confidence that every glass of milk they drink is safe and nutritious.

"It's professionally satisfying to work for a branch that has responsibility for the single largest agricultural commodity in California," said Dr. Stephen Beam, Chief of the Milk and Dairy Food Safety Branch. "I really marvel at the level of commitment and technical expertise exercised each day by our staff as they work alongside industry to make sure that the state's dairy products are as safe as they can be."

#### Guardians of the New West

When horse and cattle theft and overall crime became an increasing problem, pioneers of the Old West turned to members of their own community to enforce order. Today, leaders in the Animal Health and Food Safety Services Division, in coordination with local sheriffs, respond immediately to any dangers that threaten California's public and animal health. In many ways they are the guardians of the New West.

For example, in 1971 when drug use in show horses became prominent, the horse industry requested drug testing at all shows, and the division's Animal Health Branch immediately responded. The branch now tests more than 488,000 horses annually to ensure the integrity and sustainability of an industry that produces goods and services valued at \$4.1 billion.

The division's Livestock Identification Branch also protects the state's livestock from theft



## A Diverse Mission to Serve Animal Health and Food Safety

Animal agriculture is a critical part of California's and the nation's food supply. No wonder then that both presidential directive and the state's Food and Agricultural Code seek to protect this key resource against the ravages of disease and food contamination. On the forefront of this battle is the Animal Health and Food Safety Services Division of the California Department of Food and Agriculture. It carries out this essential mission through its four branches and the California Animal Health and Food Safety Laboratory System.

### Animal Health Branch

The Animal Health Branch is the state's professional veterinary medical unit. It safeguards livestock populations, consumers and California's economy from catastrophic animal diseases, other health-related or agricultural problems. The branch handles diseases that require statewide coordinated resources and are not controllable on an individual animal or herd basis. By implementing programs that protect California's livestock industries and consumers, the branch helps to ensure the availability, affordability and wholesomeness of our food supply.

### Milk and Dairy Food Safety Branch

California's dairy sector provides 21 percent of the nation's milk supply and leads the nation in production with more than \$5.2 billion in farm sales. Most of California's milk production is used in the manufacture of dairy products, including cheese, butter, nonfat dry milk, ice cream and yogurt. Oversight by the state's Milk and Dairy Food Safety Branch ensures state, national and international consumers that our milk, milk products and milk-like products are safe and wholesome, meet applicable microbiological and compositional requirements, and are properly labeled.

### Bureau of Livestock Identification

The state's brand registration and inspection program protects cattle owners in California against loss of animals by theft or straying. The branch's program consists of several components: registration of cattle, horse, burro and sheep brands; inspection of cattle for lawful possession prior to movement, sale or slaughter; and assistance to local law enforcement with investigations and prosecutions involving cattle theft. This program is entirely financed through brand registration and inspection fees paid by cattle owners.

### Meat and Poultry Inspection Branch

The Meat and Poultry Inspection Branch works to protect consumers in four primary areas. First, by assuring that livestock and poultry products (from production facilities not inspected by USDA) are wholesome, unadulterated and properly labeled. Second, by assuring that meat and poultry tissue not intended for human consumption is kept out of human food channels. Third, by assuring that pet foods are processed from acceptable meat and poultry sources. And, fourth, by assuring that used kitchen grease is properly disposed or recycled.

### California Animal Health and Food Safety Laboratory System

This system of five laboratories throughout California provides quality diagnostic support to the state's animal agriculture industries. It functions as a major part of California's disease-warning system. Administered by the School of Veterinary Medicine at UC Davis, it was established as a partnership between the California Department of Food and Agriculture, UC Davis, California's veterinarians and animal agriculture. Chief among the lab's critical objectives is to protect public health with rapid and reliable diagnoses of animal diseases that affect humans.

Visit [www.cdffa.ca.gov/ahfss](http://www.cdffa.ca.gov/ahfss) to learn more about California's animal agriculture and food safety programs.

and loss. Because cattle have always been valuable, they have been stolen and sold as an easy way to make an illegal buck. The intent of the livestock identification program and the animal branding identification system is to quickly recover stolen or stray cattle and protect humans and animals from devastating diseases.

Rather than relying solely on hot-iron brands as an identification system, the cowboys of today also use laptops, bar coding technology, electronically transmitted brands and radio frequency identification tagging to track animals efficiently and quickly. Instead of flipping through bulky brand books, at the click of a mouse each animal brand is available not only by owner, but also by individual animal. Technology like this helped recover 1,338 lost or stolen cattle and calves last year, which were cumulatively valued at more than \$1 million.

## Career Cowboys

Bright, motivated people are needed to carry the state's livestock industry safely and strategically into the 21st century. State Veterinarian Dr. Richard Breitmeyer said it best: "With global animal disease, rapid movement of products and animals, and challenges with agroterrorism, there are many new and diverse opportunities for careers in animal health."

More than merely a career, animal health is a calling for anyone who enjoys ranching or farming and who wants to do something positive for the public good. "It's one of the jobs you can do and know you are making a difference," said Dr. Whiteford. "When I travel around California, I am always impressed with the abundance of food we can produce."

Just as the cowboys of old guarded this nation's cattle, so too the Animal Health and Food Safety Services Division upholds the safety and integrity of the state's livestock. Moreover, through foresight and planning, the division heads off the bad guys at the pass — whether viruses or thieves — before they adversely affect the public and environment.



# The Good, the Bad, and the Bird Flu:

*Prevent, Detect and Respond*

BY JOSH EDDY

A lot can be said about bird flu — but one of the more informed and respected voices belongs to Dr. Dennis Wilson. Dr. Wilson melds both the interests of an academic researcher with the real-world outlook of the practitioner. This is evidenced by his Ph.D. in comparative pathology and his DVM. Dr. Wilson uses this expertise in veterinary epidemiology to make sure that commercial poultry and all of California's animal agriculture are protected from disease.

"The job is far from boring," said Dr. Wilson who heads the department's Emergency Preparedness and Support Unit. The key to the unit's success is Dr. Wilson's long-standing reputation for engaging critical collaborators with specific expertise to develop and implement solutions.

"Prevent, detect and respond" is the mantra of Dr. Wilson's team, working together with industry and government agencies at all levels to protect the animal legacy of the West. This is no easy task. From the introduction of foreign animal diseases to natural disasters and the possibilities of a terrorist attack on the food supply — it may seem like the plot of a Hollywood movie — but it is a reality for Dr. Wilson and his team of experts. To tackle these challenges, the program primarily works in the areas of emergency preparedness and detection.

Preparedness is a complex scientific process that involves developing precautions and procedures to prevent animal health disasters. The program supports efforts to educate companies, producers and consumers to reduce the opportunity for a disease or virus to spread. With preparedness comes the need for detection, which is implemented through animal surveillance on a regular basis throughout the state. "Surveillance allows us to detect the spark before it becomes a fire," said Dr. Wilson, "allowing quick response to the incident through our partnerships and being there to assist in recovery after the emergency is over."

In the case of bird flu, Dr. Wilson has some concern, particularly over the confusion between bird flu and pandemic flu. The influenza virus has many

strains and some viruses tend to affect one group of species more than another. "There are strains of the influenza virus that primarily affect birds and these are generally referred to as avian influenza viruses or even bird flu," said Dr. Wilson, "and these viruses usually do not affect people."

However, while bird flu and pandemic flu are not the same thing, all influenza viruses have the capacity to change. There is concern that the avian influenza circulating in Asia could evolve into a strain that spreads from person to person, thereby starting a pandemic. "Because influenza viruses mutate easily and even share genes among strains, they can adapt and jump species," said Dr. Wilson, "but this strain of avian virus has not made this adaptation."



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## "Trust, but Verify."

*Keeping Our Milk Safe and Nutritious*

BY JEFF HILLARD

During the climactic years of the Cold War, president and former California governor Ronald Reagan suggested that agreements with the Soviets should be guided by the Russian proverb: "Trust, but verify." (*"Doveryai, no proveryai"*)

This sensible principle for missile reduction applies equally well to other security issues, including milk safety. Indeed, the field staff of the department's Milk and Dairy Food Safety Branch operates by this motto. Since inspectors cannot be on-site at dairy production facilities 24/7, they work with plant owners and managers to promote conformance with state laws and regulations, to protect public health and assure consumers that only pure and wholesome dairy products are sold.

The oversight responsibilities of this branch are huge and wide-ranging. For example, each time a parent buys a child an ice cream cone on a hot summer's day, that youngster's health is partly dependent on sanitary conformance inspections performed by branch staff on more than 4,000 soft-serve ice cream facilities. Without this safety verification of ice cream equipment, a sweet treat could become a not-so-sweet health risk.

Beside ice cream facilities, branch staff inspects nearly 900 dairy farms, more than 1,200 bulk milk tankers and more than 500 milk processing plants. Branch specialists are responsible for the inspection and testing, every 90 days, of nearly 400 pasteurizer units statewide to ensure their proper operation and safety controls.

## Growing Challenges with a Growing Industry

The sheer size of California dairy production makes oversight particularly challenging. Over the past two decades dairy cow numbers have increased dramatically, making California the largest dairy state in the nation. California milk production is 21 percent of the nation's total and cheese production has more than doubled over the past decade. Daily, California's dairies produce about 12 million gallons of milk. More than 99 percent of this is processed in-state into various products, which are then sold around the world.

As the only staff in state government with the necessary expertise to perform comprehensive inspections of production and processing technologies, Milk and Dairy Food Safety specialists are involved directly in the review of engineering and construction plans for dairy farms and milk plants. They examine computerized pasteurization control systems, milk evaporators, dryers, water supplies, plant-wide control networks, robotic systems and more.

## Agency Partnerships

The scale, scope and complexity of California's dairy industry requires interagency efforts to maintain oversight. Branch professionals

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## Guardians of the New West

### *Where the Old West Meets High Tech*

BY STEVE LYLE



The Old West depicted by Hollywood is burnished in our collective consciousness. Rolling hills of green and gold. Dusty towns of rickety wood. Brilliant sunsets. Hard-charging people.

In the real west, some of those people owned cattle and — to prevent theft and otherwise help identify their animals — found it helpful to label them. Best way to do that was a brand. And more than a century later, even though technology has advanced to include DNA testing for animal ID, the old-school technique of branding is still widely used.

“We see more animals branded than anything else,” said Greg Lawley, Branch Chief of the California Department of Food and Agriculture’s Bureau of Livestock Identification, which is charged with registering and tracking brands in California. “Branding remains a popular and colorful method of identification in our state.”

Branding occurs much the same way it always has, with irons featuring custom designs. Ranch owners register their designs with the bureau, which compiles them in a brand book used by inspectors to place lost cattle, settle ownership disputes and solve thefts. Unfortunately, there is plenty of work to do on that front. Hundreds of head are stolen every year.

There are 23,600 registered brands in California, brought forth by ranches famous and obscure. The oldest active

brand is registered to the Hearst Corporation and dates back to 1917 — the same year state government began tracking brands. Prior to that, the tracking was county-by-county. The statewide program gave investigators greater resources to hunt down rustlers.

But branding isn’t fool proof. Not every livestock owner uses a brand. And, in cases of theft, it is not uncommon to see a second brand placed over the original. So modern brand inspectors need other methods to help prove ownership, and that’s where technological advances like DNA testing are important.

Many people have become familiar with DNA testing from crime shows on television. Murder, assault and robbery cases that have been cold for years are now being solved and punishment is finally being meted out to wrongdoers. DNA technology

has not only revolutionized crime fighting in cases where the victims are humans, but has also given law enforcement agencies an effective weapon to battle ever-present and increasingly clever cattle rustlers.

“DNA testing has helped us solve several significant cases,” said CDFA senior brand investigator John Suther. “The first time we used the technique, all it took was a single hair from the tail of a calf. We matched it with the DNA of the calf’s mother, and we solved the case. It is a great resource for us.”

And since then, DNA technology has been useful in other complex cases. For example, in April 2006, Bureau of Livestock Identification agents participated in a raid in Riverdale, in Fresno County, where suspects were raising Holstein calves from stolen cattle. Once again, hair

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# PROFILE

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work with allied county, state and federal agencies to enhance the regulation of milk and dairy foods. Under a cooperative state and federal public health program, the branch administers regulatory actions required for Grade-A milk products shipped in interstate commerce. Under this program, staff conducts certification ratings of dairy farms, milk processors and manufacturers of single-service dairy containers.

## Investigations and Enforcement

“Trust, but verify” carries an implied further action: enforcement. Once violations are verified, enforcement of statutes and regulations must then be carried out. Although most of



the activities involve compliance, the branch uses law enforcement when consumer safety is compromised. Government exists to serve its citizens, and ensuring public safety is one of its primary services. Few things are more important and fundamental to public safety and well being than protecting the food supply.

The Milk and Dairy Food Safety Branch seeks to ensure

that California's dairies and milk processors operate in compliance with consumer protection laws and regulations. This compliance is built on both trust and oversight verification provided by branch inspectors in the field. Because of the dedication, commitment and hard work of these safety soldiers, consumers can enjoy California dairy products knowing they are tasty, nutritious and safe.

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Bird flu continues to circulate in many places in the world, so its entry into the United States and California is possible.

“Remember, the current strain has only been shown to infect people under very specific conditions,” said Dr. Wilson. “If the virus arrives into California, between the way that commercial poultry are raised and the measures put in place to monitor for disease, eating poultry products will continue to be safe.”

Through the dedication and professionalism of individuals like Dr. Wilson the future looks bright for California agriculture.



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samples from the animals gave lab technicians at the Veterinary Genetics Laboratory at UC Davis what they needed to produce DNA data that led to the animals' return to their rightful owners.

So DNA testing is a place where the Old West meets high tech and, to date, it has been a productive partnership. While the ruddy and hale Californians of old might not completely understand that people in lab coats fight crime as effectively as the local marshal, they would certainly appreciate the results. And, in keeping pace with the latest technology, the Bureau of Livestock Identification works to use all the tools available to track and protect California's sizeable livestock herds.